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Louis Pasteur.

HIS WORK AND INFLUENCE IN MEDICINE.

Writing in the *Manchester Guardian* of December 27th, a contributor, "G. F.," deals with the life and work of the great French medical reformer—"a chemist, not a doctor"—in the following terms:—

Louis Pasteur, the greatest reformer in the history of medicine, was born at Dôle, where his father, who had won the Cross of the Legion of Honour in the Peninsular War, was employed in a tannery. As a boy he showed no promise of genius, though he had a remarkable talent for drawing portraits. When he first went to Paris to continue his studies he was too homesick to settle. "If I could only smell the tan-yard," he said, "I should be all right." His second venture was more successful, for he came under the influence of Dumas, the chemist, who inspired him with a passion for science which, added to his other qualities—his love of work, his untiring patience, his quick perception, his fertile yet critical imagination—led him with increasing distinction through professorships at Dijon, Strasburg, Lille, and Paris. In 1888 was founded the Pasteur Institute, a gift to him from the civilised world in recognition of his labours for science and mankind. But he entered it worn with work and illness, "a man vanquished by Time." He died on September 28th, 1895, and was buried in a small chapel built in the grounds of the Institute.

Pasteur was a chemist, not a doctor; but the course of his researches led him almost inevitably from crystals to ferments, and from ferments to disease. He first studied the crystallography of tartaric acid, a product of fermentation, and succeeded in differentiating its various forms. The five years he devoted to these and similar problems of molecular dissymmetry laid the foundations of modern stereochemistry. These studies, besides giving him a mastery of the microscope, forced him to consider the complex problems of fermentation. His conclusion that fermentation is due to the action of living micro-organisms involved him in years of controversy with those who regarded the process as a wholly physical change. In the end his experimental evidence prevailed, and incidentally he had proved, as far as one can prove a negative, that "spontaneous generation is a chimera." During this period he investigated the various deteriorations to which wine is subject. Here again he showed the action of living organisms, and devised special methods of heating wine to preserve its qualities. Several years later he applied similar methods to the brewing of beers; and his process of "pasteurisation" has since been widely adopted in the preservation of perishable foods. In 1865 he was asked to inquire into a mysterious disease of silkworms which had ravaged the South of France for twenty years, and which was threatening the whole industry with extinction. Though he had never handled a silkworm in his life, he set to work with his microscope and demonstrated the presence of two microbic infections. He showed how to avoid them by selecting for breeding purposes only those worms which the microscope proved to be healthy—a discovery which saved the silk trade of France.

The analogy between fermentation and infection had occurred to others before Pasteur. He often recalled the words of Robert Boyle, who had said two centuries earlier that he who could understand the true nature of fermentation would probably be more capable than anyone else of explaining certain diseases. Indeed, the microbial nature of infections had been definitely asserted in 1720 by Benjamin Marten, an obscure medical writer in London, who, as Dr. Charles Singer has pointed out, confidently outlined the main features of Pasteur's doctrine. But where they had conjectured, Pasteur demonstrated, and his early work in the field of disease marks the beginning of modern bacteriology.

His first pathological studies were directed to chicken cholera and anthrax. By a happy chance—that "chance which in the fields of observation favours only the mind which is prepared"—he discovered that an old and therefore weakened culture of the cholera germs protects a fowl against an infection which would otherwise be fatal. He successfully extended this result to the protection of sheep and cattle from anthrax, and he later devised a similar preventive inoculation for swine fever. Like his work upon silkworm disease and upon the disorders of wine, this attack upon preventable disease in animals had immense financial results. Huxley did not hesitate to say that Pasteur's discoveries alone would suffice to cover the war indemnity paid by France to Germany in 1870.

Even more remarkable was his work in the elucidation and treatment of human infections. Before his time men were guessing in the dark. It was left to this chemist with the microscope—a man who shuddered at the everyday sights of a hospital—to revolutionise medicine and surgery. When one of

his colleagues in the Academy of Medicine was expounding in metaphysical terms the mysterious causes of childbed fever, Pasteur rose and interrupted him by exclaiming: "The cause of the disease is nothing of the kind. It is the doctor and his staff who carry the microbe from the sick woman to the healthy." Semmelweiss and Oliver Wendell Holmes had preached this gospel before; but Pasteur was able to justify his rudeness by walking to the blackboard and drawing the guilty germ. "There!" he said, "that's what it's like." These words announced the modern doctrine of infections, which has already been rich in practical results, and which in the end may make good its author's bold assertion that it is within human power to make all parasitic diseases disappear from the earth.

The application of Pasteur's teaching to the practice of surgery was the work of Lister. When he left Edinburgh for Glasgow, he found there, as elsewhere, that the surgical wards reeked and festered with all kinds of suppurations—the "hospital diseases" which the modern student never sees. Dr. Anderson, the professor of chemistry, drew his attention to the researches of Pasteur upon organic decomposition, and they threw a flood of light upon the problems with which the young surgeon had been grappling for years. The suppurative complications which then made the most trivial operation "a door open to death" might, he conceived, be due to the entrance of micro-organisms into the wound. He had read of the remarkable deodorising effect of carbolic acid in the treatment of the sewage at Carlisle, where it was said also to prevent the development of intestinal parasites in the cattle on the pastures. These two ideas combined to start him upon the practice of antiseptic surgery, which from its crude beginnings in 1865 has given birth to the aseptic technique of to-day, which in the gravest operations renders accidental infection well-nigh impossible. Lister acknowleaged his debt to Pasteur repeatedly and in unequivocal terms. After he had succeeded Syme in the Edinburgh Chair of Surgery he wrote to Pasteur: "Should you at any time visit Edinburgh, it would, I believe, give you sincere gratification to see at our hospitals how largely mankind is being benefited by your labours."

Pasteur's later researches in hydrophobia made him known to the man in the street, for this disease has always had peculiar terrors for the popular mind. He began his investigations in 1880, and met with difficulties at the outset, for he failed to isolate a causative germ. He found that in rabbits the disease affected particularly the spinal cord, preparations of which he used in place of a culture of germs. He knew how to exalt or lessen the virulence of the virus, and finally he obtained one of a known strength. By 1884 he could prevent the development of the disease in dogs which had been bitten by a rabid animal; but he hesitated to extend this treatment to man. His hand was forced by the entrance into his laboratory of a boy who had been badly bitten by a rabid dog two days before. In sore anxiety, and after consulting with his medical assistants, Pasteur resolved to attempt the cure. M. Vallery-Radot, in his splendid "Life of Pasteur," tells us how, "in those slow, dark hours of night, when all vision is distorted, Pasteur, losing sight of the accumulation of experiments which guaranteed his success, imagined that the little boy would die." His fears were groundless, and the boy lived to serve on the staff of the Pasteur Institute. Hydrophobia had taken its place among preventable diseases.

It is difficult to conceive the full scope and development of Pasteur's work. It entitles him to rank with Darwin in the history of nineteenth-century science. But while Darwin's labours profoundly affected philosophy, Pasteur's were turned to more practical ends. Indeed, he does not seem to have had much interest in speculative questions. He found satisfaction in the faith of his fathers, and died holding a crucifix.

Of Pasteur it has been said that he was the most perfect man who has ever entered the kingdom of science. His home, his work, and his country were the ruling passions of his life, and to their inspiration he was wont to ascribe the results of his own genius and labours. His modesty was notable. In 1881, when the International Medical Congress greeted his appearance with a rousing ovation, he turned to his companions and said: "It is no doubt the Prince of Wales arriving. I ought to have come sooner." The disasters of his country in 1870 nearly broke his heart, and moved him to say in his haste that every one of his future works would bear on its title-page the words "Hatred to Prussia! Revenge! Revenge!" Time taught him that such a patriotism is not enough. At the opening of his Institute he said: "Two contrary laws seem to be wrestling with each other to-day: the one a law of blood and death, ever imagining new means of destruction and forcing nations to be constantly ready for the battlefield; the other a law of peace, work, and health, ever evolving new means of delivering man from the scourges which beset him. Which of those two laws will ultimately prevail God alone knows." At his jubilee four years later he voiced his own invincible belief "that science and peace will triumph over ignorance and war, that nations will unite not to destroy but to build, and that the future will belong to those who will have done most for suffering humanity." Among such benefactors of mankind he himself will always be remembered; for if it be true, as Mr. Wells has said, that a great man is one who serves God and his fellows with a humble heart, the name of Louis Pasteur is assuredly among the greatest.

Fifty head of pedigree poultry were killed in one night by a fox on a farm at Saxmundham, Suffolk.

Speaking on the problem of rural roads at a meeting of Bletchley farmers, Lord Orkney stated that the Bucks County Council had just constructed a road at a cost of about £1,900 per mile, and horses could not stand up on it.

Veterinary Appointments.

The question of appointments, both municipal and otherwise, is continually arising, and the conditions published below, if a fair sample of those under which the successful candidate works, are distinctly humiliating. In the letter accompanying the conditions of contract it is stated that the agreement is terminated by one month's notice, and payment paid monthly on the actual number of the stud for the month.

There are points in the Schedule which are, to say the least of it, ridiculous. (1) In the event of no horse being suitable for purchase, a fee will be allowed as for the purchase of one horse—but the note following reaches the limit. (2) No payment to be claimed or based upon a horse which does not pass the final trial, nor upon any horse which does not remain in possession of the Council for a period of at least 15 days.

Therefore, the approved veterinary surgeon may examine seven or eight horses and not be able to pass one, or, even if passed sound, they may not be satisfactory at work.

Each paragraph with its conditions is rather reminiscent of buying articles from a shop.

Surely it would not be difficult for any Council or Borough to fix a definite yearly appointment, with emoluments based on an average of the previous five years, and it should not be too late for this Council to do so.

The N.V.M.A. would be pleased if conditions of such appointments were, in future, forwarded to the Salaries Committee. It is time the general public should cease to think of us as tradesmen. We feel that if our members who have been asked to tender would each sign a letter pointing out they are unable to accept the conditions offered, and if any who have already tendered would withdraw their offer, the N.V.M.A. might at this late date be able to do something in the matter.

The Schedule of Conditions is as follows :—

. . . the undersigned hereby offer to perform the duties of Veterinary Surgeon to the Council of (a London Borough) on the terms hereinbelow stated, and . . . further undertake to enter into an Agreement with the Council in which will be set out more fully the duties of the appointment.

Description of Duties.	*Rate of Payment.* £	s.	d.	
1.—To attend the Committee when purchasing horses and assist and advise in the selection of the same, conduct the preliminary trial, and during and at the termination of the trial thoroughly examine such horses and give certificate as to the soundness and suitability for the Council's work. In the event of no horse being suitable for purchase by the Council a fee will be allowed as for the purchase of one horse. (*Note.* — No payment shall be claimed or based upon a horse which does not pass the final trial, nor upon any horse which does not remain in possession of the Council for a period of at least 15 days.)				At per horse purchased.
2.—Examining horses away from London (travelling expenses will be allowed).				At per day.
3.—To visit the stables as often as required, give all necessary veterinary medical and surgical treatment, perform all operations, give *post-mortem* report on all horses which die in the possession of the Council, provide all necessary medicine and other matters or things or appliances requisite for the proper veterinary medical and surgical treatment of all sick, lame or injured horses, give general supervision over the shoeing and advise thereon, report on and generally supervise the feeding of the horses, inspect and professionally examine all the horses, even when there is no sickness or lameness apparent, give all necessary directions to the Foreman or Horse-keepers, attend all meetings required, make all reports required, and generally do and perform all the duties, matters and things mentioned in the Agreement hereto annexed.				At per horse per annum.
4.—To examine a horse belonging to any other persons which may be injured by the Council's servants or horses and report thereon.				At per case.
5.—To attend when required at any Court as a witness in case any claim is made against the Council.				At per day.

Women as Veterinary Surgeons.

So much ill-informed eulogistic reference to this profession as a calling suitable for women has appeared in the lay press since the welcome advent of the first woman

veterinary surgeon that it is something of a relief to find *The Field* presenting the common-sense aspect of the matter in the following terms:—

"The granting of the diploma of membership of the Royal College of Veterinary Surgeons to Miss Cust is but a tardy recognition of that lady's distinguished career. As a student she was easily ahead of her male competitors, many of whom we happen to know, and whose gifts are very freely recognised by them. Despite the obstructions put in her path by the conservative principles which formerly prevailed in the professions, this courageous lady overcame all obstacles and, denied the diploma when a man would have been entitled to it, she applied for a veterinary inspectorship on the strength of her real qualifications, although technically unqualified because the college authorities would not allow her to be put on the list of licensed practitioners. The gallant Irishmen of the west who appointed her in opposition to official instructions considered themselves justified in being 'agin the government,' for the lady soon showed her capacity both in inspectorship and in private practice, the latter growing so quickly that a male assistant became necessary, than whom she had no greater professional admirer. Gifted in mind and body, this lady has proved that a woman may become a good veterinary surgeon, but 'one swallow does not make a summer,' nor does one lady with exceptional physical endowments prove that the veterinary profession is one suitable for women. There are quite a number of aspirants among the gentler sex, but when interviewed on the subject it is found that they do not wish nor are they fitted for the rough work of the general practitioner, but that they have in mind some special department where they can minister to sick dogs, cats, or birds, or take up research work in the laboratory. Women would like as students to take only those subjects bearing upon the branch they intend to follow when they have qualified, but the male student, whatever his future intentions, must go through the whole curriculum, including horse shoeing and obstetrics and other such dirty and laborious work before the diploma is granted. Women are hardly fitted for such operations, and examiners are not likely to insist on very sincere tests in the practical examinations. If then the lady student is in anyway favoured, her diploma would be lessened in value, while the average man would hardly be willing to grant her an easy road to a position in which she could skim the cream of veterinary practice by specialising in the lighter work or competing for laboratory appointments. The slaughterhouse and the pigsty which the veterinary inspector must frequently visit, and there conduct more or less prolonged investigations, do not somehow commend themselves to the parents of gently nurtured women as suitable spheres for their energies. But there is not a country practitioner of any experience who has not proved their capacity to do such things when necessary. With the increasing employment of mechanical traction the prospects for the veterinary profession are none too rosy, and there are enough men at present struggling to make ends meet, but this, of course, opens the wider subject of competition between the sexes with which we are not immediately concerned."

The Veterinary Record.

13th January, 1923.

PASTEUR.

On Wednesday, December 27th last, it being the 100th Anniversary of the birth of Louis Pasteur, at Dôle in the Jura, the bells of Paris rang out and the Pasteur Institute and the General Association of Students of Paris at the Sorbonne celebrated the centenary—in a somewhat modest manner in view of the fact that the National Celebration of the Centenary will be held next May, in Strasburg, where the great scientist commenced his far-reaching researches. Although Pasteur never received a medical training, he revolutionized all the pre-existing ideas held as to the nature of fermentation, putrefaction and infection, which he proved to be similar processes. Ultimately, he placed preventive and curative treatment of intectious processes on a firm basis, and thus laid th foundation of biological therapy.

How different are those who are studying, preventing or curing disease, whether in animals or vegetables to-day. All are the disciples of the great genius! Less than half a century ago the majority of medical and veterinary practitioners declaimed his views and went on their old hit-or-miss way, until time overtook them and they were replaced by a newer generation. His first unqualified supporters and exponents numbered many veterinary surgeons—among others, Touissaint, Chauveau and Bouley. Pasteur, although a great scientist was pre-eminently practical, as was best shown by his devising a method of treating rabid bites before the nature of the disease had been determined.

Beyond being a great Frenchman, he was the greatest internationalist of the nineteenth century, for all his efforts were directed, not merely to benefit his own countrymen, but all peoples of the world. He said, "Men of science could wish for a greater glory than that of contributing to the fame and fortune of their country, they might aspire to originating vast benefits to the whole of humanity." He thought science, art and letters should bind nations together and should teach the Beautiful, the True and the Right.

Pasteur was inspired in his preventive inoculation by the work of Edward Jenner on Vaccination, and held this Englishman in great esteem. England returned the compliment through Lister, who was inspired by the labours of Pasteur, and introduced

methods of treating wounds that rendered hitherto dangerous operations comparatively safe.

Through his instrumentality the world is saving every year in agriculture, hygiene and industries more than would pay off the cost of the Great War.

The name of Pasteur deserves to be reverenced by the human race for the good his work has done for humanity.

How different from those who incepted the Great War and foresaw all its destruction, misery and suffering! The scientific man who is endeavouring to benefit humanity is still looked upon by a great section of the general public with a certain amount of mistrust or awe. On the other hand, it appreciates and even glorifies the men who determine destruction for selfish national ends.

The Royal College of Veterinary Surgeons had the great *savant* on its rolls as an Honorary Associate; and, no doubt, that body will be represented at the national celebration of his centenary, which is to be held sometime next May at Strasburg.

Might we suggest that the N.V.M.A. should, in order to show its appreciation of the incomparable services rendered to humanity by the Immortal Genius, also be represented by delegates—preferably those engaged in bacteriological research in each section of the British Isles?

Tenders for Veterinary Attendance.

We understand that tenders are being invited by the Municipal Borough of Bermondsey for veterinary attendance, and the supply of all necessary remedial agents for the sick horses at the various stables of the Council, and also to examine and certify any horses which the Council may be about to purchase.

We think it well to call the attention of members of the profession to the following resolution of the Council of the Royal College of Veterinary Surgeons, which was passed on the 8th October, 1920:—

> That, in the opinion of this Council, the practice of certain Public Bodies in advertising veterinary appointments as open to tender is opposed to public interests and to the dignity of the profession, and ought to be abandoned.
>
> Furthermore the Council is of opinion that members of the profession should decline to apply for appointments offered on such conditions.

In view of this resolution it is obviously the duty of all members to refrain from submitting a tender to the Town Clerk of Bermondsey. Any member who, in face of the above resolution, which is passed in the interests of the profession, submits a tender for giving his services as a professional man, must be considered as committing a breach of professional etiquette.

Association Reports.

Royal College of Veterinary Surgeons.

Quarterly Meeting of Council.

A Quarterly Meeting of Council, followed by a Special Meeting, was held at 10 Red Lion Square, Bloomsbury, London, W.C., on Friday, 5th January, 1923. Mr. H. Sumner (President) occupied the chair, and the following members were present:—

Major J. Abson, D.S.O., T.D., Dr. O. Charnock Bradley, Lieut.-Col. J. W. Brittlebank, C.M.G., Messrs. J. B. Buxton, J. H. Carter, J. C. Coleman, J. F. Craig, M.A., S. H. Gaiger, A. Gofton, R. Hughes, W. S. King, G. H. Livesey, G. H. Locke, G. P. Male, J. W. McIntosh, J. McKinna, Sir J. M'Fadyean, LL.D., Mr. W. J. Mulvey, J.P., Mr. T. S. Price, Major P. J. Simpson, D.S.O., Mr. S. H. Slocock, Mr. T. F. Spencer, Sir Stewart Stockman, Messrs. S. Wharam, and J. Willett; Mr. Robert Fortune (Standing Counsel), Mr. George Thatcher (Solicitor), and Mr. Fred Bullock (Secretary).

Minutes.—The minutes of the last meeting, which had been printed and circulated, were taken as read and confirmed.

Apologies for Absence.—The Secretary announced that apologies regretting their inability to attend the meeting had been received from Major-General Sir L. J. Blenkinsop, and Messrs. Clarkson and Trigger, both of whom were ill.

Obituary.—The Secretary read the obituary list.

Correspondence.

The Secretary read a letter from Mrs. Garnett, conveying to the members of the Council her heartfelt thanks for their expression of sympathy and appreciation of her husband.

The Secretary read a letter from the Royal Sanitary Institute, inviting the appointment of a delegate from the College to the Congress to be held at Hull, from July 30th to August 4th, 1923.

The President: Is it your wish that a delegate should be appointed? If so, will you please make your selection. The College has usually been represented, has it not?

The Secretary: Yes.

Professor Gofton: I move that the consideration of the appointment of a delegate be deferred until the April meeting. A good many members of the Council will know much better then what their arrangements are likely to be at the time the Congress is held. I move accordingly.

The President: Is it your wish that this matter be deferred until the April meeting?

Agreed to.

Admissions to Membership.

The Secretary read the following list of members admitted to the College since the last quarterly meeting:—

LONDON.—Ambrose, E. R., Bridgeman, M., Brown, W., Codrington, W. S., Fisher, R. C. U., Forsyth, A. A., Gill, E. J., Heath, J., Holt, J., Parker, C., Richards, J., Stableforth, A. W., Cust, Aleen (Miss).

LIVERPOOL.—Thwaite, J. W., Thornton, H., Dennett, W. H.

EDINBURGH.—Bowie, A. R. C., Bristow, R., Dunwoody, R., Galloway, I. A., Maguire, T. J., Peirson, W., Simmons, R., Taylor, C. B.

GLASGOW.—McKellar, J. Mc., Pottie, A., Stark, A.

DUBLIN.—Anderson, W., Callanan, A. F., Corcoran, D. D., Geoghegan, J. J., MacFeely, W. J., McKee, G., O'Reilly, G. T., Schofield, J. O. G.

EXAMINATION COMMITTEE.

Mr. GOFTON read the following report of the Examination Committee :—

I. *Minutes.*—The minutes of the previous meeting, having been printed and circulated, were taken as read and confirmed.

II. *Correspondence.*—(*a*) Letters were received from Examiners in reply to the letters sent by the Secretary on the instructions of the Committee at the last meeting (paragraph III., *b.* and *c.*).

(*b*) An application was received from Mr. E. R. D. Storrar, who was prevented from attending the examination in December, owing to illness, for his fee to be held over until the next examination. A medical certificate was submitted.

It was resolved that the application be acceded to.

(*c*) An application was received from a candidate who was rejected at the D.V.S.M. examination held in June, having failed to obtain the necessary pass marks in the written portion of the examination in one subject, for permission to present himself for re-examination in June, 1923.

It was resolved that the candidate be required to present himself for re-examination in the Written, Oral, and Practical parts of the examination in the required subject, and that the examiners be instructed that in the event of a candidate failing to obtain the necessary pass marks in the Written portion of the examination, he should not be allowed to proceed to the Oral and Practical parts.

III. *Reports on December Examinations.*—Reports were submitted from the Chairman of the Board of Examiners, Local Secretaries and Delegates at the examinations held in December, which were duly approved.

It was resolved that the Secretary be instructed to send letters of thanks to those persons and institutions who had rendered assistance to the College in connection with the examinations.

IV. *Fellowship Examination.*—The Secretary reported that an examination for the Fellowship Diploma had been held in Edinburgh on the 8th and 15th December, under the Chairmanship of Mr. A. Gofton, when one candidate presented himself, namely, Mr. W. W. Peggie. The candidate was successful and was awarded the Fellowship Diploma.

V. *Educational Certificates.*—Educational Certificates Nos. 2649-2664 and 2673-2678 were submitted, and with the exception of certificates Nos. 2650 and 2661 were duly approved.

VI. *Applications for Exemptions.*—(*a*) Applications were received from eight ex-service candidates for exemption from the preliminary examination, accompanied in each case by certificates of general education or testimonials from Headmasters.

It was resolved that the applications be granted in the following cases :—

2665, Kyle, J. B., 23, four years' service (joined up at 16) Irish Int. Ed. Brd. Junior Cert., English, Maths., Latin, French, Exp. Science.

2667, Pattinson, G. P., 22, three years' Naval service. Lieut. Osborne Entrance Exam. (Public School Entrance). Also passing out exam. at R.N. College, Dartmouth. Eng., Maths., Electricity, Mechanics, German.

2670, Mellenfield, A. K., 26, three years' service. Commission. Demonstrator in Chemistry and Physics at Royal Dental Hospital. Headmaster's Cert.

2671, Saunders, G. N., 27, eight years' service. Capt. Indian Army. Surveyors' Inst. Prelim. Headmaster's Testimonials. Colloquial Hindustani.

2672, Budgen, W. D., 26, three-and-half years' service. Flying Officer. Diploma of Agric. S.E. Agric. Coll., Wye, 1920. Distinction in Vet. Science.

(*b*) An application was received from Mr. A. W. Noel-Pillers, in consideration of his four years' military service, for permission to sit at the next examination for the Diploma in Veterinary State Medicine, without previous attendance at the prescribed course of instruction.

It was resolved that the application be acceded to.

VII. *Applications for Concessions.*—Applications for concessions were received from nineteen candidates who had failed in one subject at the December examination for permission to pass to the next year's course and to sit for the required subject at the July examination. The applications were granted in thirteen cases.

VIII. *Examiners' Fees.*—The question of fees and allowances paid to Examiners was considered and referred to a Special Sub-Committee, consisting of the President, Treasurer, Chairman of the Examination Committee, and Chairman of the Finance Committee, with instructions to report to the Council to-morrow (Friday), January 5th, 1923.

IX. *Election of Examiners.*—The question of the form of advertisement for the election of the usual Examiners was also referred to the Special Sub-Committee mentioned in paragraph VIII.

X. *Report.*—The Secretary reported that during the past quarter he had attended seven meetings of the Grants Committee of the Ministry of Labour, at which the cases of forty-nine grantees had been considered, of which thirty-three were Veterinary students. In three cases the grants had been cancelled. Extensions or increases have been approved in all other cases.

XI. *Stellenbosch University.*—An application was received from the Stellenbosch University for the recognition of the first year examination in Chemistry, Physics, Botany and Zoology under Bye-law 62.

It was resolved that the matter be referred to the Special Committee on Foreign and Colonial Diplomas.

XII. *Fellowship Examiners.*—A letter of resignation was received from Colonel H. Watkins-Pitchford as Examiner in Tropical Medicine for the Fellowship Diploma.

It was resolved—

(*a*) That the resignation of Colonel Watkins-Pitchford be accepted with regret.

(*b* That the question of the election of a successor be deferred to the next meeting.

REPORT OF SPECIAL SUB-COMMITTEE.

The Special Sub-Committee appointed under paragraph VIII. of the above report met the same evening. There were present The President (Mr. H Sumner), Mr. A. Gofton, Mr. W. J. Mulvey, Major J. Abson.

The question of Examiners' Fees was considered, and it was resolved to recommend that the guaranteed minimum payment for the first day's examination at any centre or centres be raised from £3 3s. 0d. to £4 4s. 0d.

That the fee to the Examiners in Class D. be increased from 10s. per student examined, to 15s. per student examined.

A draft of the advertisement relating to the election of Examiners was submitted and approved.

On the motion of Professor GOFTON, seconded by Mr. CARTER, the report was received and adopted.

REGISTRATION COMMITTEE.

The SECRETARY read the minutes of a meeting of the Registration Committee, held on Thursday, January 4th, 1923, from which it appeared that fifteen cases were considered by the Committee.

A complaint was submitted, accompanied by a copy of report published in the *Veterinary Record* of September 3rd, 1921,of a discussion at a meeting of the Royal Counties Veterinary Medical Association, held on July 22nd,1921, with regard to the conduct of Sir John M'Fadyean.

It was resolved that the Committee find that the charges made against Sir John M'Fadyean are totally unfounded.

In the case of H. Potts, non-member, name removed, the solicitor reported that the appeal authorised at the previous meeting was still pending.

It was resolved that a prosecution be instituted in the case of G. Murrell, non-member, using title.

The SECRETARY read a letter received from the Secretary of the R.S.P.C.A. in the case of S. Cooke, non-member, which was considered satisfactory.

It was resolved that a prosecution be instituted in the case of P. H. Hodgkinson, non-member, for using title.

A satisfactory explanation was received in the case of a member charged with covering.

The case of another non-member was deferred for further evidence.

In the absence of proper evidence from the complainant, a charge of covering against a member was ordered to be struck out.

The SECRETARY was instructed to communicate with the Dumb Friends' League, asking for information on the subject of a complaint made in regard to the employment of unqualified persons.

Another case of a non-member using title was ordered to stand over for further evidence.

Complaints against four members were considered, and it was resolved that there was no case for action.

The case of a member charged with advertising was deferred for further evidence.

CORRESPONDENCE.

Correspondence was submitted, and the Secretary was instructed as to the replies to be sent.

RESTORATION.

An application was received from Mr. William Franklin for the restoration of his name to the Register, it having been removed by the Registrar under Sec. 5 (4) of the Veterinary Surgeons Act, 1881.

It was resolved to recommend that the name of Mr. William Franklin be restored to the Register of Veterinary Surgeons.

On the motion of the PRESIDENT, seconded by Mr. MULVEY, the report was received and adopted; and on the motion of the PRESIDENT, seconded by Colonel BRITTLEBANK, the seal of the College was authorised to be attached to the two prosecutions suggested in the report.

HONOURS AND PRIZES COMMITTEE.

Sir STEWART STOCKMAN read the following report of the Honours and Prizes Committee :—

I. *Minutes.*—The minutes of the previous meeting, having been printed and circulated, were taken as read and confirmed.

II. *Walley Memorial Prize.*—The Secretary submitted the Auditors' report on the marks gained by the students at the written examinations held in December, 1921, and July, 1922, in the subjects of Pathology, Materia Medica, and Hygiene, which showed that Mr. R. F. MONTGOMERIE obtained the highest number of marks, namely, 126.

It was resolved that the Walley Memorial Prize for 1922 be awarded to Mr. R. F. MONTGOMERIE, of the Royal (Dick) Veterinary College, Edinburgh.

III. *Williams Memorial Prize.*—The Secretary read the report of the Auditors on the number of marks gained by the students in the final examinations held in July and December, 1922, from which it appeared that Mr. D. L. McWHIRTER obtained the highest number of marks, namely, 127.

It was resolved that the Williams Memorial Prize for 1922 be awarded to Mr. D. L. McWHIRTER, of the Royal (Dick) Veterinary College, Edinburgh.

On the motion of Sir STEWART STOCKMAN, seconded by Mr. MALE, the report was received and adopted.

PARLIAMENTARY AND GENERAL PURPOSES COMMITTEE.

Dr. BRADLEY read the following report of the Parliamentary and General Purposes Committee :—

I. *Minutes.*—The minutes of the previous meeting, having been printed and circulated, were taken as read and confirmed.

II. *Correspondence.*—(*a*) The following letter was received from the Colonial Office :—

Downing Street,
3rd January, 1923.

Sir,

With reference to the letter from this Department of the 30th of August last, I am directed by the Duke of Devonshire to inform you that a despatch has been received

from the High Commissioner for Iraq, in which he refers to your observations on the reduction of the budget for Veterinary Services in Iraq.

(2) The High Commissioner states that the change of administrative arrangements criticized in your letter was necessitated by the urgent need for drastic economy, and that while he regrets that the new arrangements are not identical with those recommended for British Colonies and Protectorates, he does not see his way to advise the Iraq Government to alter them under existing financial conditions, except conceivably in the direction of further retrenchment.

(3) I am to add that His Grace views the curtailment of the Veterinary Service (and other services) in Iraq with regret, but that he is in full agreement with the attitude adopted by the High Commissioner.

I am, Sir,

Your obedient Servant,

(*Signed*) F. E. SHUCKBURGH.

(*b*) Correspondence was read from the Association of Unregistered Practitioners and the Privy Council, and the Secretary was instructed as to the reply to be sent.

III. *Importation of Animals Act.*—The Secretary submitted a copy of the Importation of Animals Act, 1922, which passed into law on the 15th December, 1922.

IV. *Exportation of Horses Bill.*—A copy of the Exportation of Horses Bill was submitted, together with a resolution passed by the West of Scotland Division N.V.M.A.

V. *Ministry of Health Milk Regulations.*—The Secretary submitted copies of the Milk (Special Designations) Order, 1922, made by the Ministry of Health, under Section 3 of the Milk and Dairies (Amendment) Act, 1922.

VI. *Humane Slaughtering of Animals.*—A letter was received from the Town Clerk of the City of London, stating that the Court of Common Council had, on the recommendation of the Cattle Markets Committee, endorsed the resolution of the recent Annual General Meeting of the N.V.M.A., recommending the institution of a Government Committee of Enquiry to investigate the whole question of the humane slaughtering of animals intended for human food.

VII. *Supplemental Charter.*—A letter was received from the Clerk of the Privy Council stating that the Royal College might proceed to make arrangements for the election of Examiners as provided for in the draft Supplemental Charter, as their Lordships were proceeding with its consideration.

VIII. *Australian Veterinary Bills.*—The Secretary submitted copy of a Bill to provide for the regulation of the practice of Veterinary Science in New South Wales, which had been submitted to the Lower House of New South Wales on the 6th October, 1922, and a copy of a Bill to amend the Veterinary Act, 1918, governing Veterinary Practice in Tasmania.

On the motion of Dr. BRADLEY, seconded by Mr. BUXTON, the report was received and adopted.

FINANCE COMMITTEE.

Major ABSON read the following report of the Finance Committee :—

At a meeting of the Finance Committee, held at the College, 10 Red Lion Square, W.C.1, on Friday, 5th January, 1923. Present: Major J. Abson (in the chair), Dr. O. Charnock Bradley, Messrs. J. H. Carter, R. Hughes, G. H. Locke, W. J. Mulvey, J. McKinna, P. J. Simpson, H. Sumner, and S. Wharam.

I. *Minutes.*—The minutes of the previous meeting, having been printed and circulated, were taken as read and confirmed.

II. *Financial Statement.*—The Treasurer presented his financial statement for the quarter showing a balance in hand of £1,295 15s. 2d., and liabilities amounting to £259 6s. 3d., together with liabilities in connection with the December examinations.

It was resolved that the Treasurer's statement be approved, and that he be ordered to pay the liabilities shown, together with examiners' fees and expenses, examination expenses, gas, monthly salaries, petty cash, repairs, coke, and electric light.

III. *Chief Clerk.*—The Sub-Committee appointed at the previous meeting (see minutes para. VI. (c)) reported that they had received 102 applications for the post of Chief Clerk, and had interviewed six selected candidates. They had appointed Mr. F. Knight at a commencing salary at the rate of £200 per annum, dating from November 6th, 1922.

It was resolved that the action of the Sub-Committee be approved.

IV. *Correspondence Clerk.*—The Secretary reported the resignation of Miss Attwater as correspondence clerk.

V. *Junior Clerk.*—An application was received from Mr. A. J. Poppy for an increase of salary, and

It was resolved that the salary of Mr. A. J. Poppy be increased by 5s. per week as from January 1st, 1923.

VI. *Insurance.*—The Secretary reported that he had communicated with the insurance societies, and had obtained their approval of the new central heating installation. A reduction in the amount of the premium paid was secured on the policy of insurance for the contents of the building.

VII. *Register Advertisements.*—It was resolved that an advertisement be accepted from the National Veterinary Benevolent and Mutual Defence Society for insertion in the Register free of charge, in the same way as the advertisement of the Victoria Veterinary Benevolent Fund.

VIII. *Superannuation Scheme.*—The Secretary submitted particulars of a superannuation scheme recommended by the Advisory Committee on University Grants (1922 Cd. 6369), by which the authorities of Universities and Colleges had agreed to co-operate in a superannuation scheme for the benefit of the staffs of such institutions. He stated that the Royal College of Veterinary Surgeons was eligible to participate in such a scheme, which provided that while the officer remains in the service of the institution and until he reaches the age of 60, a deduction not exceeding five per cent. may be made from his yearly salary. The institution must provide a sum which, when added to the deduction made from the salary of the member, will amount to fifteen per cent. of his total salary. This sum is then applied in paying the premium on a policy of insurance effected with a selected insurance company on the life of the member. The policy is effected

in the name of the institution, and the officer has the right to select the class of policy to be taken out, *e.g.*, life insurance, endowment insurance, deferred annuities, or a combination of these.

It was resolved that this Committee approve of the principles of the scheme outlined and recommends it to the Council for adoption for the members of the staff eligible to take part in the scheme. The Committee further recommend that if the principle is approved by the Council, the matter should be left in the hands of the Committee, with power to act.

Major ABSON: I move the reception and adoption of the report.

Mr. LOCKE: I second that.

Sir STEWART STOCKMAN: I think Mr. Abson read out that the contribution under this insurance scheme from the corporate body itself was 10 per cent., and that the official was to pay 5 per cent. My information is that it is the other way about.

The SECRETARY: The official pays five and the institutions ten.

Major ABSON: It states here that the official pays five and the institution pays ten.

Sir STEWART STOCKMAN: I think we had better clear this up. I have an official document before me here; I do not think you can alter the rules, and it certainly says that the official will pay ten per cent. and the institution five per cent.

Major ABSON: Mr. Bullock will clear it up.

Sir JOHN M'FADYEAN: It is five by the institution and ten by the official.

Major ABSON: We were not talking at our meeting this morning in percentages. It was understood that this institution would pay £60 a year and that Mr. Bullock would contribute £30 a year.

Sir STEWART STOCKMAN: If we make those conditions, that is all right; but I understand that this was based on the conditions prevailing for the University scheme, and my information is that it is the other way about.

The PRESIDENT: I think Mr. Bullock has made a mistake.

Sir STEWART STOCKMAN: I do not mind paying the £60 a year, but it should not be stated in the report that it is the University scheme.

Sir JOHN M'FADYEAN: The institution pays five and the official ten, and you must not contract to divide it in other proportions. It is a rigid scheme.

Col. BRITTLEBANK: Need the matter be finally decided to-day?

Major ABSON: We are not going into the details of the scheme at all; it is simply the principle of the thing which we want you to agree to to-day. If you will only agree to the principle, I think we can arrive at the conclusions subsequently, because it is rather a big subject and will want very careful thought. We have not had time to think it out yet.

The PRESIDENT: The report goes further than that, because it says that "the matter should be left in the hands of the Committee, with power to act."

Professor GOFTON: There is one point about which I should like further information. I understand that the superannuation is effected by means of a policy which is taken out in the name of the institution. I should like to know what becomes of that policy in the event of the resignation of the official. The College has contributed so much and the official has contributed so much. The official may retire at any age before the policy matures. What happens to it then?

The PRESIDENT: That is all provided for in the scheme.

The SECRETARY: The institution is empowered to hand over to the retiring official the surrender value of the policy.

Sir STEWART STOCKMAN: Is it a pension at the end or an endowment?

The PRESIDENT: There are a lot of options. Is it your wish that this report be received and adopted, with power to act? (Cries of "No.")

Mr. WILLETT: We would like more information on this subject, sir. I understand a certain difficulty has arisen that the Chairman of the Committee has not foreseen. He said that they had not thought it out properly. I approve of the scheme itself, but there seems to be a divergence of opinion as to the sum to be contributed by the College.

Sir STEWART STOCKMAN: It is a very important matter, because I understand that you are not allowed to vary the scheme. Could not we just accept the scheme, whatever it is?

Colonel BRITTLEBANK: Would it not be possible for every member of Council to have a copy of this scheme sent to him?

Sir JOHN M'FADYEAN: It takes a lot of reading.

Major ABSON: I was not asking you to adopt the scheme; I was asking you if you would adopt the principle.

Mr. WILLETT: The President stated that it was with power to act.

The PRESIDENT: If this report is received and adopted, it gives the Committee certain powers. The report says: "The Committee further recommend that if the principle is approved by the Council, the matter should be left in the hands of the Committee, with power to act." It is quite definite.

Sir STEWART STOCKMAN: But that is power for five per cent. only.

Major ABSON: Whatever the law on the matter is, we should naturally follow, whether it be five per cent. or ten per cent., one side or the other. We are evidently not fully *au fait* with the scheme at present.

The PRESIDENT: Is it your wish that the report be received and adopted?

Colonel BRITTLEBANK: I would like to move that this portion of the report dealing with superannuation be taken back for further consideration and report. I do not know the scheme, but Sir Stewart Stockman and Sir John M'Fadyean apparently do, and they describe it as a rigid scheme that will not permit of any alteration. According to the figures here, you are only empowered to contribute five per cent. towards the necessary payment.

Sir JOHN M'FADYEAN: There is nothing to prevent the institution making it more.

Colonel BRITTLEBANK: Then the resolution of the Finance Committee ties you down to a definite figure.

Mr. WHARAM: It should say "at least"; that would make it clear.

Sir STEWART STOCKMAN: That is not my point. My point is this, that we are asked to approve the scheme—a very good scheme—and in the manner that that scheme is put before us it means the College paying ten per cent. of Mr. Bullock's salary, or anybody's else's salary, and the official paying five per cent.; whereas the University scheme as it stands lays down that the institution shall pay five per cent. and the official ten per cent. If the institution wants to adopt the other thing, I have no objection, but we are not then adopting the University scheme, but another scheme. This is misleading.

Mr. MCKINNA: I think the simplest way is to adopt the scheme.

The PRESIDENT: Adopt the principle.

Mr. MCKINNA: No, the scheme itself.

Sir STEWART STOCKMAN: We can, of course, pay ten per cent. if we like, but the Council ought to know that it is going to do so.

Major ABSON: If you will allow me, I should like to strike out this proposition and ask if we may go further into it and put forward the scheme at our next meeting, so that the whole of the members may know the details.

The PRESIDENT: Strike out the power to act?

Major ABSON: Yes. If we strike out the power to act, that will meet the case, I think. It is clear that there is some misunderstanding with regard to the percentage that should be paid by this institution and by the insured. We will clear the air by the next meeting. As long as you gentlemen agree to the principle that is a step forward.

The PRESIDENT: With the deletion of the power to act, it is your wish that the report be received and adopted?

The resolution was carried unanimously.

Examiners' Fees.—The recommendations of the Examination Sub-Committee with regard to examiners' fees was submitted and approved.

PUBLICATION, LIBRARY AND MUSEUM COMMITTEE.

Col. BRITTLEBANK read the following report of the Publication, Library and Museum Committee:—

I. *Minutes.*—The minutes of the previous meeting, having been printed and circulated, were taken as read and confirmed.

II. *Presentations to Library.*—The Librarian reported that since the previous quarterly meeting the following presentations had been made to the Library, and

It was resolved that a vote of thanks be conveyed to the respective donors.

By Mrs. F. W. GARNETT.
- Ray Society's Publications, 1851, 1853, 1862, 1883, 1887, 1901, 1903-1906, 1908. 1911 and 1912, 1915-1919 and 1921.
- The British Annelids, 1908, 1910, 1915 and 1922.
- The British Midibranchiate Mollusca, 1910.
- Journal of the Royal Agricultural Society of England, 1906--1908, 1910-1914 and 1921.
- Transactions of the Highland Society of Scotland, 1884, 1897 and 1922.
- Annals of Tropical Medicine and Parasitology, Vol. I., 1907-1908.
- Journal of Tropical Veterinary Science, Volumes I. and II., 1906 and 1907.
- Veterinary Review, Volumes I. to IV., 1917-1920.
- Reports of the New Zealand Department of Agriculture, Volumes for 1898 and 1899, 1905-1907, and 1909.
- The Review of Applied Entomology, May, 1914—December, 1915.
- Parasitology, Volumes I.-IV., 1908-1911.
- The Journal of Hygiene, Volume VI., Part 4, September, 1906.
- The House Fly, C. Gordon Hewitt, Manchester, 1910.
- Neumann's Parasites, Prof. J. MacQueen, 2nd Edition, London, 1905.
- Animal Parasites of Man, Dr. Max. Braun, London, 1906.
- Animal Parasites and Messmates, Prof. P. J. Van Beneden, 4th Edition, London, 1889.
- The Internal Parasites of our Domesticated Animals, Prof. T. Spencer Cobbold, London, 1873.
- Parasitic Diseases of Poultry, F. V. Theobald, London, 1896.
- Board of Agriculture and Fisheries Leaflets, 1-200.
- Board of Agriculture and Fisheries British Breeds of Live Stock, 1910.
- U.S. Department of Agriculture: Animal Parasites of Sheep, 1890.
- A Text Book of Agricultural Entomology, E. A. Ormerod, 2nd Edition, London, 1892.
- Economic Zoology: First Report, F. V. Theobald, London, 1903.
- Agricultural Zoology, E. A. Ormerod, London, 1894.
- Plants Poisonous to Live Stock, H. Long, London, 1917.
- Poisonous Plants in Field and Garden, Prof. J. Henslow, London, 1901.
- Methods and Theory of Physiological Histology, G. Mann, London, 1902.
- A Manual of Histology, J. M. Purser, London, 1884.
- Veterinary Materia Medica, Parke, Davis and Co., 5th Edition, London, 1921.
- Veterinary Extracts.
- Royal Veterinary College Extracts, 1892.
- Food, Feeding, etc., Extracts.
- Post Graduate Lectures, October and November, 1905.
- Ticks, G. H. F. Nuttall, London, 1908.
- Tuberculosis: Veterinary Inspectors' Course, Royal Veterinary College, London, July, 1913.
- The Genus Demodex, S. Hirst, London, 1919.
- Journal of the Royal Microscopical Society.
- The Life History of Certain Acarina.
- The Maiotic Process in Mammalia, J. E. S. Moore and C. E. Walker, 1906.

By Major E. C. RUSSELL, R.A.V.C.:—
- *Veterinary Record*, 1845-1850.
- *Veterinary Record*, Vols. I.-XIV., 1888-1902.
- Edinburgh Veterinary Review, 1861-1864.
- Journal of Comparative Pathology and Therapeutics, Vols. I.-XVI., Bound.
- Journal of Comparative Pathology and Therapeutics, Vols. XVII.-XX., Unbound.
- Journal of Tropical Veterinary Science, Vols. I. and II., Unbound.
- The Practitioner, 1872-1880.
- The Horse, Youatt, 1831.
- Veterinarians' Vade Mecum, J. Gamgee, 1868.
- A Treatise on Horse Shoeing and Lameness, J. Gamgee, 1871.
- A Treatise on the Diseases of the Horse, W. Gibbon, 1851 (no title-page or cover).
- The Farrier's New Guide, W. Gibson, 1729.
- Vegetable Materia Medica, G. V. S. Wills, 1877.
- A Treatise on Veterinary Medicine, Vol. III., J. White, 1814.
- Glanders, W. Hunting, 1887.
- Epizootic Lymphangitis, W. A. Pallin, 1904.
- General Surgical Pathology and Therapeutics, T. Billroth, 1871.

A Practical Treatise on Glanders and Farcy in the Horse, R. Vines, 1830.
The Modern System of Farriery, G. Skeavington.
Animal Plagues, G. Fleming, 1871.
A Manual of Veterinary Sanitary Science and Police, Vols. I. and II., G. Fleming, 1875.
A Practical Treatise on the Use of the Microscope, J. Quekette, 1855. 3rd Edition.
Veterinary Medicines, their Actions and Uses, F. Dun, 1878.
Blaine's Outlines of the Veterinary Art, C. Steel, 1865.
A Treatise on the Diseases of the Sheep, J. H. Steel, 1890.
A Pharmacopæia, R. V. Tuson, 1869.
Horses and Stables, F. FitzWygram, 1886.

REPORTS.
Rangoon Veterinary Department, 1921-1922.
Nigeria Agricultural Department, 1921.
Bombay Veterinary College, 1921-1922.
Camel Specialist, 1921-1922.
C.V.D. Bihar and Orissa, 1921-1922.
C.V.D. Madras, 1921-1922.
Bengal Veterinary College, 1921-1922.
Johannesburg Abattoir and Live Stock Market, 1921-1922.
Indian Students' Department, 1921-1922.
National Association for Prevention of Tuberculosis, 1921-1922.
Inter-Departmental Committee: Sale of Milk in Scotland, 1922.
Medical Officer of Health, Salford, 1921.
Veterinary High School, Utrecht, 1921-1922.
17th, 18th, 19th, 21st and 25th Reports of Bureau of Animal Industry, Washington.

CALENDARS.
Edinburgh University, 1922-1923.
Liverpool University, 1922-1923.
Royal College of Surgeons, 1922.
College of Preceptors, 1922-1923.
Ontario Veterinary College, 1922-1923.
Stellenbosch University, 1922.
Madras University, 1922.
Bombay University, 1922-1923.
Punjab University, 1922-1923.
Stockholm Veterinary High School, 1920.
Pennsylvania School of Veterinary Medicine, 1922-1923.
New York State Veterinary College, 1922-1923.
Veterinary High School, Utrecht, 1922-1923.

By the AUTHORS.
How to Choose a Dog. F. T. Barton.
Terriers. ,,
Cattle and Sheep. ,,
Cattle, Sheep and Pigs. ,,
Horses. ,,
Geschiedenis der Maanblindheit, C. Brands.
Geschiedenis van de Nederlandsche Paardenfokkerij, Van Leenwen.
Vaccine and Serum Therapy, L. C. Maguire.

By W. WOODS, Esq.:—
The Groom's Oracle, 2nd Edition, 1830.
Diseases of the Chest and Air Passages, W. Percivall, 1853.

By H. C. WILKIE, Esq.:—
Lectures on Anatomy and Physiology, B. Harwood, 1787.

PAMPHLETS AND REPRINTS.
Collected Papers, London School of Tropical Medicine, 1922, Parts 1 and 2.
History of Veterinary Anatomy in England, Sir. F. Smith.
Anatomical Notes on the Accessory Organs of the Eye of the Horse, Sir F. Smith.
The Biology of Schizophyllum commune Fries, V. A. Putterill.
Prickly Pear as Fodder for Sheep, Stead and Warren.
Dominion of Canada Experimental Farms Seasonable Hints.
De Beteekenis der Genetische Eigenschapsanalyse voor de Teelt der Huisdieren, H. M. Kroon.
Bijdrage tot de Kennis van Anaplasmosis bij Rund en Buffel, J. A. Kaligis.

PERIODICALS.
The usual List.

III. *Purchase of Periodicals.*—The Librarian was authorised to renew the subscriptions to the usual periodicals.

IV. *Binding.*—The Librarian was authorised to obtain estimates for binding, showing pattern and prices, to be submitted to the Committee at its next meeting.

V. *Cataloguing.*—The Librarian submitted a report on the work of cataloguing the Library, which was approved. He was authorised to purchase index cards, accession books, labels, etc., at an estimated cost of £25, and to appoint a temporary assistant to carry out the work at a wage of £2 2s. 0d. per week.

VI. *Trust Fund.*—The Solicitor submitted a draft declaration of trust for the Library Fund, which was approved and recommended for adoption.

On the motion of Col. BRITTLEBANK, seconded by Mr. WHARAM, the report was received and adopted.

(To be continued.)

Central Veterinary Society.

The ordinary general meeting of the Society was held at 10 Red Lion Square, Holborn, on Thursday, December 7th, 1922. The President, Captain A. E. Willett, in the chair.

The following signed the attendance book:—Messrs. F. W. Willett, H. D. Jones, H. J. Parkin, G. H. Livesey, J. W. McIntosh, J. Willett, J. B. Buxton, Professor G. H. Wooldridge, Colonel A. J. Williams, Majors P. W. D. Smith, G. W. Dunkin, and G. Rees-Mogg, Captains J. Bell, Hamilton Kirk, A. J. Wilson, R. Bryden, H. R. Allen, J. McCunn, T. J. Bosworth, P. S. Howard, and L. S. Balls, Messrs. E. Lionel Stroud, R. J. Foreman, W. Norman Thompson, J. Rowe, G. P. Male, W. Perryman, H. S. King, Sydney Slocock, W. S. King, and J. F. Macdonald, *Hon. Sec.*

Visitors:—Captains W. J. Moody, J. Stow Young, and R. Daubney, and Mr. R. L. Cornell.

Apologies for non-attendance were received from Sir John Moore, Major Hobday, Colonel Smith, Mr. J. C. Coleman, and Major P. J. Simpson.

Mr. E. J. Catmull and Mr. H. Keeling Roberts wrote tendering their resignations, which, on the proposition of Mr. J. Willett, and seconded by Mr. Thompson, were accepted with regret.

Mr. Bullock, Secretary of the Victoria Veterinary Benevolent Fund, sent a letter thanking the Society for its donation and subscription.

EXHIBITS.

Captain KIRK brought forward a specimen of the *Ascaris mystax* of the cat, the peculiarity in this case being that at the same time as the worms were evacuated, a solid mass of eggs was also passed.

He also mentioned a case in which four Siamese kittens were badly affected with *Tænia elliptica*, all of which died, and on *post-mortem* he found 146 Tæniæ, averaging six inches in length, in one kitten. He said that the kittens were brought to him in a very bad condition, vomiting, salivating, and with arched backs. He suspected typhus, and within 24 hours all were dead. On *post-mortem* he found enteritis in all of them, particularly in the kitten which had the greatest number of parasites. The mother was also infested with worms.

In one kitten he also found an unknown worm with a spatula-shaped head. Accidentally the worm was cut in half in examining *post-mortem*, but he had stuck it together. It measured 4½ inches in length, and when fresh was of a pure green colour. He said that he did not know which end was the head, but thought it was the wide end.

The *Cysticercus fasciolaris* was the vesicular form of the *Tænia crassicollis*, and inhabited the liver of rats and mice. The worm produced bore a great resemblance to this cysticercus, and possibly was a transition form between the immature and mature tænia. Three types of worm were found in this litter, and in some individuals all three were present.

Captain Kirk said that at the last meeting he brought two horseshoes which he thought would interest the Fellows, but as time was pressing he was asked to bring them to that meeting.

The first was a Bavarian horseshoe, which he obtained from a cab-driver in Munich whose horse had gone lame. It was a particularly good shock absorber, and lasted four weeks on the fore-feet, and two weeks on the hind-feet. The peculiarity about it was that stout tarred rope was hammered into the fullering, and hard cork was tightly wedged into the whole space enclosed by the two branches. The speaker elicited the fact that before the war a set of these shoes cost 2 marks 80 pfennigs. They cost last August 350 marks. The German cabmen spoke very highly of the shoe.

The other exhibit was a pad which had an anti-slipping and anti-concussion device. It was made of rubber, and constructed with ventilation holes.

Major Rees-Mogg exhibited four larynges,—a normal one, one that was the larynx of a "roarer" which had not been operated on, a third from an animal similarly affected, and which had been operated on by himself on the left side, and a fourth that had been operated on on both sides by Mr. Hobday several years since. The operation had proved successful in that it had enabled two horses which would have been got rid of as useless to do several years' good work.

The black horses in the Household Cavalry were expensive to buy, and took a long time to train, and if the horse was a good one and not too old, his experience was, after doing about fifteen cases, that the operation was well worth performing.

In reply to Colonel Williams and Mr. G. P. Male, Major Rees-Mogg said that, in his experience, if the mucous membranes of both ventricles were excised, it was necessary to put in a tracheotomy tube, or else keep an attendant with the patient for the first forty-eight hours, or the animal might suffocate. Sometimes bad results followed—such as the occurrence of fibromas at the seat of operation, and also the whole of the larynx might become ossified.

Major Dunkin exhibited snapshots of cases of what he believed to be nodular venereal disease in the sheep, showing distinct ulceration of vulval lips.

The ram showed definite necrotic lesions on the penis, and from his observation the condition was undoubtedly contagious, chiefly by copulation.

There were four photographs which he passed round. No. 1 showed active ulceration of the vulval lips in the ewe; No. 2 showed partially-healed lesions of the vulva, also thickening of the lips and wrinkling of these parts; No. 3, swelling and inflammation of the prepuce of the ram; and No. 4, ulceration and necrotic patches on the penis of the ram.

Mr. R. Bryden, who exhibited specimens of the *Tænia plicata* of the horse, remarked that as that worm was very uncommon in this country, he thought it would be of interest to the members of the Society.

Professor Wooldridge said that the specimens brought forward were exceedingly interesting, and he would like to offer one or two remarks.

With reference to the suggested block of eggs exhibited by Mr. Kirk, it would have been very much more interesting had a microscopical examination been made at *post-mortem* to ascertain if they really consisted of eggs. He suggested that as Captain Daubney was present, who was an expert on this subject, the specimen be handed to him for verification. Major Rees-Mogg must be congratulated in obtaining the larynges of the horses so long after operation. It was rare that one could keep trace of operated cases and see the effects after years. The effect of the operation produced good results, and enabled unworkable horses to become useful, and a pleasure to ride or drive.

The specimen of *Tænia plicata* exhibited by Mr. Bryden was an excellent one, and he had only seen one better. This parasite, in his (Professor Wooldridge's) experience, was much more commonly met with in donkeys than horses.

He was most interested in the photographs shown by Major Dunkin. He (Professor Wooldridge) had met with venereal disease in sheep more frequently in the West Country and Hampshire, and he believed it to be due to the bacillus of necrosis, and conveyed by flies. It might be found in maiden ewes which had not been tupped, and occurred chiefly in the autumn. The lesions might be found on the vulva, udder, penis, prepuce, scrotal wall, and on the skin of the thighs. He thought it could be contracted during coition. The treatment he adopted was to inject the internal parts with lotions of carbonate of zinc and solution of tar, the external parts being treated with the same drugs, made up in the form of an ointment.

Mr. MALE congratulated the Society on the splendid show of specimens brought forward, and said that he had never seen a better collection at any meeting.

With regard to the operation for roaring, he had been operating for a number of years, and from his experience he had found it most beneficial, especially upon hunters and thoroughbreds. In the latter, horses useless for racing had been successfully operated upon, and had turned out well. One case he recollected won the second time out, and also his two subsequent races, the distances being ½ mile, 1 mile, and 1 mile again.

With regard to the subject brought forward by Major Dunkin, he considered venereal disease of sheep to be fairly common; he used zinc permanganate in treatment, and found it most successful.

Lieut.-Colonel A. J. WILLIAMS said that in his opinion the roaring operation should be looked upon as one which in many cases would make a useless animal into a useful one.

Among the good results he had seen was a Suffolk Punch operated on soon after the operation was started in England. The animal roared so badly that it could with difficulty work a chaff-cutter; the operation was so effective that the animal was able to do any work, and turned out to be one of the best draught horses in the unit.

About the same time a young riding horse, which developed into a very bad roarer after an attack of strangles, was operated on. In this case the result was exceptional, as when galloped to test his wind no evidence of roaring could be detected.

The most interesting case in his experience occurred in India. A bad roarer improved to such an extent that the horse became fit to hunt in the hills at nearly 8,000 feet above sea level, and to his knowledge was still going well after two hunting seasons under such trying conditions.

Among the failures was one which showed no improvement, and on *post-mortem* examination laryngeal polypi were discovered.

He would like to ask Major Rees-Mogg which he found most advantageous, operating on one side of the larynx or both.

With regard to the Siamese kitten with the 146 worms, he would like to know whether there were any nervous symptoms.

The specimens were most interesting, and the Fellows who brought them forward were to be congratulated.

Captain KIRK replied that there were not any nervous symptoms, except defective sight, but there was great emaciation, constipation in some, and diarrhœa in others.

He did not know whether the mother was imported or bred in this country.

Major DUNKIN stated that in the cases which he had described the lesions were confined to those situations seen in the photographs.

Captain Stow Young, M.C., Captain F. J. Andrews, B.Sc., and Mr. R. L. Cornell, B.Sc., were nominated for election as Fellows of the Society.

Mr. KIRK passed round for the inspection of the Fellows interested some photographs of the Munich Veterinary College, which he took whilst at that place. He said it was a magnificent building, and reminded him more of our London War Office than of the usual type of Veterinary College.

He mentioned that he had a pamphlet from the Midland Veterinary Association, at the end of which was a list of instruments owned by the Society, to be lent to members, and whilst he realised that the Central usually led whilst others followed, he thought in this case their Society might be well advised to consider whether they should emulate the methods of the Midland Association.

Mr. J. WILLETT supported Mr. Kirk's suggestion.

PRESIDENTIAL ADDRESS.

The President, Captain A. E. Willett, next delivered his Presidential Address, which read as follows:—

Gentlemen,—First of all, I must tender to the Fellows of the Central Veterinary Society my heartfelt thanks for the honour they have done me in electing me to preside during this present session.

It was quite an unexpected honour, but is appreciated greatly.

To live up to the traditions of this now ancient and widespread Society is no small task for one of its Fellows, especially following directly such an able and distinguished gentleman as my immediate predecessor, Mr. Livesey.

He and his predecessors have lent lustre to the profession in general, and to this Society in particular, to such an extent that one must of necessity and in self-defence keep a strong hand on one's self to emulate their great example.

The success of our Society in the past has also been largely due to the untiring efforts of our late Secretary and friend, Mr. Hugh McCormack, who has been sorely missed, and who is difficult to replace; but, while deploring his loss myself, as I am sure do also the rest of the Fellows who have been associated with him, we have as his successor one who will, I feel, acquit himself with credit, and will help me during my session as President, by cajoling our professional confrères to bring forward interesting papers for discussion, as well as morbid specimens and notes of unique cases, which are never wanting in promoting discussion for our mutual benefit.

Without these we shall have a flat session, and I do hope that there will always be that generous support that has obtained heretofore, and helped the previous Presidents to bring about a profitable and successful year of office.

There is an enormous amount of research work to be done in our profession, and first and foremost in my mind is that in connection with canine distemper. A more elusive disease I do not know—its phases are many, beginning at the ordinary and well-known catarrhal type, to the enteric and meningeal, together with their complications.

Why I say first and foremost is, perhaps, because to the canine practitioner, who is face to face with

this trouble, there is a never-ending problem of how to treat it.

To my mind there is only one method, and that is to treat symptoms as they arise.

The "Jess" bacillus has failed us, and other bacteriologists have discovered physiologically identical bacteria, but have failed to reproduce the disease by the one isolated bacterium, so we are, up to now, *in status quo ante.*

I do not for a moment venture to suggest that this is the most important disease in veterinary practice, as there are many others of even greater economic importance, both to the veterinary surgeon and the rest of the world.

Pure milk has to be obtained by hook or by crook, and if legislation will only remain stable and give that necessary assistance that the practitioner requires, whether he be an Inspector under a Local Authority, or under the Ministry of Agriculture, or Public Health, there is no doubt we shall go far towards the goal aimed at, viz., the eradication of the disease, and if in the cattle at first, why not eventually in the human patient as well?

The tuberculosis question is much too full of possibilities for one to go into details in an address of this kind, but if the testing of herds be carried out properly, *i.e.*, by the subcutaneous method, and a control test, strictly under the eye of the veterinary surgeon, and not through the agency of the farmers themselves, we shall always have a basis to work upon, and I am of opinion that this careful testing should be compulsory throughout the country, and records accurately kept and acted upon by a properly-appointed aed representative commission for the eradication of such a scourge.

Foot-and-mouth disease has once more appeared in our midst, and many of us have, to our sorrow, had personal contact with this highly contagious and infectious disease.

How does this infection gain entrance? Birds of passage have been credited with its introduction into this country. This, at least, has been suggested by experts who have the handling of the disease for the Ministry of Agriculture, and who have to go through the whole of its administrative process.

In an outbreak in Middlesex this seems highly probable, coming as it did with the advent of a strong North-East wind and the consequent influx of myriads of sea-gulls close to the seat of the outbreak.

Here I should like to mention that the powers that be would confer a great boon on the local practitioner if they would circularise him regarding his district.

He is the last man to be informed, unless an Inspector of the Ministry of Agriculture who is cognisant of the possible duration of quarantine—and, though frequently questioned by dairy-farmer clients, he is unable to furnish any *data*, even although the outbreak may have occurred in his own district.

I have had several amusing experiences during the recent outbreak. One lady had a lame kitten, and, owing to the outbreak of foot-and-mouth disease, thought it might be dangerous to keep it. The kitten had only sprained its carpus.

Another lady had a dog with paraphimosis, and the dog's spasmodic action raised her suspicions that it might be foot-and-mouth disease.

A company owning several horses 'phoned and asked if it were safe to send their horses into the street, one horse having a sore coronet, the result of brushing.

On a dairy farm a girl milker had a pimple on her hand, and was about to be examined by the doctor for foot-and-mouth disease, as the farmer (a lady) was in a state of apprehension about it.

We are greatly indebted to our energetic Fellow—a recent past President of this Society—Mr. J. B. Buxton, for so kindly causing to be re-published the necessary details regarding dangerous drugs, and it should be a great help in not allowing ourselves to be caught napping, should an official of the authorities swoop down and demand to know how we expend the drugs that come under the category "Dangerous Drugs."

There seems to be a movement for the advent of lady members of our profession, and, at our annual dinner last month, it was mentioned and approved by one eminent member of our profession.

I do not intend to give an opinion as to the rights or wrongs of such an innovation, but it seems to be practically the only learned profession in which, at present, there are no lady graduates, and one lady at least has worked hard to be admitted, and from what I gather seems about to be recognised at long last.

It is not invidious to mention the work of the R.A.V.C., many of the officers of which are prominent members of this Society.

During a large part of the war I had the honour to serve under many of its officers, and for the most part found them efficient in their professional as well as their administrative work. From them we have derived no small amount of knowledge through their research work, their surgery, and their work on tropical diseases, and they have never omitted to give to the members of our profession the benefit of their observations and the results.

Whilst in Salonica, I was informed by a distinguished officer that *our* corps was the best organised and most efficient of all branches of the army, and I agreed with him.

The V.O. in a unit was always a good fellow, and during the war his constant collaboration with the M.O. has helped a lot to cement a lasting union between the medical and the veterinary professions. We owe much to each other.

Through the strenuous work, also, of Major F. Hobday, we have now acquired a distinct place in the union of our different branches, which should materially and mutually be for the benefit of mankind and our dumb friends.

Comparative medicine, with its adjuncts of pathology, bacteriology, and therapeutics, especially serum therapeutics, must be of value in elucidating many of the difficulties which have beset us in the past,

and as we make ourselves better acquainted with these subjects, by keeping up to date as far as possible, we, as a profession, must be useful allies to our human medical and surgical practitioners.

Constant collaboration cannot but be fruitful of mutual advancement in the knowledge of the various branches implicated.

I am amongst those who are anxious for progression, and to progress it is necessary to procure the right men. The entrance examination to our veterinary schools is, to my mind, too easy, and I hope the day is not far distant when nothing but a University entrance examination will suffice for a student to enter upon his veterinary college curriculum.

My hope, during my Presidency, is that we have numerous papers, much and instructive discussion, and that we shall all gain in knowledge of our subjects by these meetings.

Discussions, to be of use, are best when conducted on the lines of debate and in a fraternal spirit, and not in one productive of acrimony. One has met with cases where young, nervous albeit brainy fellows have much information to give, but are too retiring to rise and expound in the presence of extreme critics, and I trust that we shall hear the views of not only our oldest and most experienced, but also the voices of our youngest Fellows—in which case we shall arrive at very useful information from the consensus of opinion of veterinary surgeons of all ages.

I was struck by remarks from one of our delegates recently, who said that papers were read in sequence and discussed as a whole. This does away with confusion, and might well be adopted in our own meetings when several subjects are under discussion.

It is with pleasure that we hear of the appointment of one of our most recent Presidents. I refer to Mr. J. B. Buxton.

Mr. Buxton deserves his appointment, and I know I shall voice the rest of the Society when I congratulate him most heartily.

It is a matter, too, for congratulation to our profession that one of its members should receive so important a post, and one so closely allied to the sister profession.

In conclusion, may I thank you for the patient hearing you have given me, and I trust that you will bear with me when I once more ask you to support me during my Presidency as far as you possibly can, for the good of this Society and the benefit of our profession. (Applause.)

A Few Notes on Equine Parasites.

The following paper on the above subject was then read by Major G. Rees-Mogg, O.B.E.

Worms are soft-bodied, symmetrically, bi-lateral animals with a vertebral column; some have an alimentary canal and some a nervous system.

Their structure is:—

(*a*) Externally, a chitinous layer.
(*b*) Granular protoplasmic layer.
(*c*) Dermal muscular layer.
(*d*) Peritoneal layer.
(*e*) Body cavity which contains an alimentary canal and a generative system.

The water vascular supply is at two sides and one end (the inferior).

Those with an alimentary canal have a mouth gut and anus. Some have salivary glands as well on both sides. They breathe cutaneously by osmosis.

Vascular supply. As this muscular layer serves as a heart by contracting on the fluid in the body cavity, this fluid, when it has supplied the tissues, is collected up again into the excretory canal. Worms live mostly on the blood and digestive material. They move by contraction of their muscular layer.

Reproduction. In some the sexes are separate and in some hermaphrodite. In those that have separate sexes the male is usually smaller than the female.

1. (*a*) Plathelminthes. Flat worms.
(*b*) Nemathelminthes. Round worms.

Plathelminthes. These are Hermaphrodite.

(1) Trematodes, *e.g.*, Flukes (Unsegmented).
(2) Cestodes, *e.g.*, Tape Worms (Segmented).

Nemathelminthes. Round worms.

Sexes are distinct, and the females are the larger. Each animal has its own species of Ascaris.

1. Ascaris. Ascarides are stout and strong, with a thick envelope. Life History:—The eggs are very resistant to heat, cold and disinfectants, *e.g.*, a 5 per cent. solution of formalin does not hurt them. The eggs may live for months. Their habitat is in the small intestines, and they pass out from the intestines and are not capable of at once infecting another animal. The eggs, on being swallowed by a vertebrate animal, pass into the small intestines, where they hatch. The larvæ make their way into the blood stream and reach the various organs, such as the lung, and pass through the alveoli of the lung, up the bronchi to the trachea. As a rule the larvæ have left the lung after ten days. On reaching the larynx they make their way down the œsophagus into the intestines. If the animal is a suitable host, they settle down, but if unsuitable, they pass out and die.

Symptoms. In most animals the symptoms of Ascaridiosis are those of emaciation. The chief Ascaris in the horse is *Ascaris megalo cephala*, which is up to 15 inches long. It is very commonly found in the intestines of the horse, but does not usually do any harm. I remember once making a *post-mortem* on an animal with a broken leg, and I found thousands of these worms in the intestines, yet the horse was in fat condition. They are often found massed in bundles. Professor Craig reports a case of an enlargement appearing in the region of the umbilicus in a colt 15 months old, and six Ascarides escaped.

Oxyuris Curvula. This worm lives in the cæcum and large intestines. Copulation takes place there. The males seem to die out and the females are carried down in the fæces to the rim of the anus, where she stops and lays her eggs, and a creamy substance is seen round the root of tail, and the eggs are eaten by another horse.

Symptoms. Horse rubs his tail.

Treatment. Rectal washes of 10 per cent. saline solution or quassia at repeated intervals for a fortnight.

2. STRONGYLIDÆ. These are long thread-like worms which are found in the respiratory tracts, and the two most important are :—

(*a*) *Dictiocaulus filaria.*

(*b*) *Synthetiocaulus rufescens.*

Life History. These worms are present in the alveoli of the lungs. Eggs are laid in the lung and are coughed up and out in the expectoration, and are swallowed (especially in cows) and pass through the alimentary canal in the fæces on to the open, and are easily killed. They moult but keep on their own skin, and have reached a very resistant stage. When there is a shower of rain, or there is a dew, the larvæ climb up the blades of grass and ensheaf themselves. They are eaten and swallowed, migrate to the lungs, and complete the circle. They reach maturity in the lungs about six months after ingestion.

Symptoms. They set up a bronchitis or verminous broncho-pneumonia in young animals, usually in the autumn and winter. The cough is a loud, strong, expansive one. Usually several young animals are affected together. Diagnosis may be made by finding the egg in the expectorant material.

Treatment. A volatile oil, creosote, turpentine by the mouth, or intratracheal injections.

Chloroform, 3.
Olive Oil, 1.
Carbolic Acid, 1.

Calves ½ to 1 oz. Give every three days and repeat. A drop of chloroform may be dropped into one nostril.

Prevention. In some parts of the country husk in calves is so bad that some farmers have altogether given up trying to rear calves. One veterinary surgeon, who has had great experience in the disease, told me that calves when suckling mothers which are out at grass are not nearly so likely to get the disease. Farmers have told me that they always keep their calves in a house for the first year, and thus avoid getting the disease.

Drain the land, and salt it. Turn out animals after the dew has departed.

NEMATODES IN THE HORSE.

Formerly called Sclerostomes.

(*a*) *Strongylus armatus* (old name). New nomenclature :—Strongylus vulgare, strongylus equinus, strongylus edentatus.

(*b*) *Cylicostomum* (old name *Scelerostomum tetracanthum*), (14 or 15 different worms). Chief three :—

1. Triodontophorus Major.
2. T. Minor.
3. T. Serratus.

Strongylus armatus. This worm is met with in the large intestine of horse. It is 2 to 2½ inches long in the female and 2 inches long in the male. Body is brown or reddish brown, straight and rigid.

Cylicostomum (*Scl. T.*) Female is up to ¾in. long; male up to ½in.

Colour may be whitish in prepared specimens, but when met with at *post-mortem*, or at rectal examination or in the fæces, are often blood-coloured. They are not so rigid as armatum, and often show a curve, nor are they so firmly attached to the mucous membrane.

Life History. They live in the large bowel, and the eggs are passed out in the fæces, and hatch out as larvæ, and are easily killed in the early stage, but they soon develop a strong capsule. They are then eaten with grass or swallowed in the water, and the larva bores into the circulatory system and encysts itself in the walls of the blood-vessels (usually mesenteric) and thrombi, emboli and aneurisms form, and from there they migrate to the submucous tissue of the large intestine. Up to this stage they are not sexual. They then develop sexual organs, and penetrating into the lumen of the bowel become adults. The Cylicostomes do not bore into the blood-vessels, but they do form small tumours in the mucous membrane, in which they moult. An American writer says that the larval form of *Strongylus equinus* develops in various organs and tissues outside of the digestive tract, and also in the walls of the digestive tract, acting as foreign bodies and occasioning varying degrees of injury according to location, but that they usually occur in the liver, lungs and pancreas. He also states that the larvæ of *Strongylus edentatus* are specially apt to occur under the serous membranes (the peritoneum and pleura), but may occur almost anywhere.

The larvæ of *Strongylus vulgaris* cause aneurisms of the great mesenteric arteries, and later pass as agamic (non-sexual) adults to the walls of the cæcum, where they form small cysts.

The larvæ of cylicostomum (*Scl. tetracanthum*) occur in cysts in the walls of the large intestine.

Verminous aneurisms are well known to veterinary surgeons as the potential cause of colic and enteritis. The adult worm of the strongyles are blood-suckers, and the habit of sucking blood produces resultant anæmic conditions and catarrhal enteritis, and also produces the associated lowering of vitality and of resistance to other injurious factors. As a proof of this, I know of a case where an owner bought three young horses at Tattersall's which were very poor, and proved to be suffering from red worms. Later on all three got strangles and died. It is extremely unlikely that any would have died if they had been suffering from strangles alone.

Pathogenosis. Usually found in foals and young animals at grass at any time.

Symptoms. Horses not doing well; pot-bellied; staring coat; great depression; fæces stink; chronic diarrhœa; animal does not grow; swelling of the legs; stiffness in gait; œdema of the legs and sheath, and sometimes colic. Fever is absent.

Treatment. The noted French authority, Mons. Raillet, states that it is difficult to expel parasites from the large intestines by oral medications in any

host species; and I think this is the general view of all parasitologists and veterinary surgeons. At any rate, it is decidedly the prevailing view as regards the expulsion of strongyles from the horse. Here the worms are remote from the mouth and associated with large masses of undigestive material in a way that makes dilution of the anthelmintic certain and contact with the worms exceedingly difficult. Messrs. Hall, Wilson, and Wigdor, of America, made many experiments, and were able to complete their experiments by making *post-mortem* examinations, and they found that these worms could be removed with great certainty and with a high degree of efficiency. Their explanation of the high degree of efficiency obtained in the removal of worms from the cæcum and colon of the horse is that it is due to the increase in the time factor as regards period of exposure of the worm to the anthelmintic. It is most necessary to fast the animal before giving medicine for from 24 to 36 hours. In the two cases which I treated, I found that oil of chenopodium is the best, but it is very expensive. Americans recommend carbon tetrachloride. Thymol may be given in 1 oz. doses. Atoxyl in injections, and increasing the dose is also supposed to be very efficacious. I have reported two cases in the *Veterinary Record*. Turpentine also appears sometimes to give good results. Sulphate of iron and tartar emetic gave very poor results.

Prevention :—

1. Do not always graze all horses on the same pasture, but mix with cattle, sheep and pigs.
2. Frequently change horses to different fields.
3. Mow the field occasionally.
4. If horses have got the disease, they ought to be housed and the manure on no account put on grass land, but on ploughed land. (I know that in some big thoroughbred breeding establishments the manure is picked up and taken away from the grass field.)
5. A year's rest is necessary. Alternate yearly grazing with horses and other animals. Worms require a yearly host for reproduction.

There are two questions I would like to ask the Fellows of this Society :—

(*a*) Are the eggs of the worm likely to remain in the hay and thus re-infect animals ?

(*b*) In addition to the worms causing anæmia, which produces emaciation, do the worms produce a toxin as well, and is there a secondary infection due to an injured bowel wall being infected by bacteria ?

(*To be continued*).

PROTEOTYLIC ENZYMES OF SPLEEN.

The author asserts that the spleen contains at least three different enzymes :—(1) *a*-protease, acting on the spleen substance and on casein in an alkaline medium (PH 8.8); (2) *b*-protease, acting on the spleen substance and on casein in a weakly acid medium (PH about 5·4); and (3) erepsin, not acting on casein, but having its most powerful action on Witte's peptone at PH 7·5 to 8·5.—S. G. Hedin (*Journ. Biolog. Chem.*, Baltimore, October, 1922, 177. through *Journ. Amer. Med. Assoc.*, November 25, 1922, 1877).

Notes and News.

The Editor will be glad to receive items of professional interest in these columns

"Super-monumental Trough."

R.S.P.C.A. PROPOSAL CONTROVERSY.

The Daily Express waxes satirical at the expense of the subscription which is being collected for the purpose of erecting a "sort of super-monumental trough" in honour of horses that fell in the war. That journal "can conceive of nothing more stupid than to erect such a monument to these horses," and, "what," it asks, "can a horse have to do with a horse's cenotaph ?" A counter-proposal is made that the £2,000 already collected be used to alleviate the distress of worn-out horses now in harness.

The Daily Express publishes several letters approving its point of view, including a communication from Captain Hamilton Kirk, M.R.C.V.S., R.A.V.C., which runs as follows :—

"I suggest that the money would be better expended on rest and treatment of the miserable, decrepit animals belonging to impecunious owners who have no money with which to replace their sick horses during treatment. If the money collected were given to these institutions for the continuance of their noble work, and for the provision of hire horses in special circumstances, the cause of humanity and of the horse would be far better served than by the erection of the finest stone edifice ever seen."

Replying to this and other letters, the case for the monument is set out by Captain Fairholme, chief secretary of the R.S.P.C.A., as follows :—

"The suggestion that the money should be utilised 'to abolish the hideous traffic in worn-out horses,' is, I fear, not a useful one. It is not money that is required to abolish this traffic, but the co-operation of the Government and the strong support of the members of Parliament of a Bill to prevent the possibility of these horses being exported alive.

"Your correspondent says that 'a horse, unlike a human being, cannot look at the monument and obtain satisfaction by recalling the great deeds of his ancestors.'

"This is not the point of view which inspired those who desired to put on permanent record the services of the animals in the war.

"The idea is that a permanent record—and monuments to animals have already been erected in other countries—would be an educational one, and should serve to remind the passer-by not only of the help that was obtained from the animals, but also that all animals need, and deserve, the kindest treatment and care.

"The people who have contributed to the fund have given their donations for that definite purpose."

Agricultural Tribunal of Investigation.

The Prime Minister has appointed a Tribunal of Investigation into the Agricultural problem in accordance with the undertaking given by him in the debate on the Address in the House of Commons. The Tribunal will consist of the following economists, viz.:—Sir William Ashley, Professor of Commerce and Vice-Principal of the University of Birmingham; Professor W. G. S. Adams, Gladstone Professor of Political Theory and Institutions, Oxford; and Professor D. H. MacGregor, Drummond Professor of Political Economy, Oxford.

Mr. C. S. Orwin, Director of the Institute for Research in Agricultural Economics at Oxford, has been appointed Agricultural Assessor to the Tribunal, and Mr. D. B. Toye, of the Ministry of Agriculture and Fisheries, will act as Secretary.

Embargo Removal Realities.

"The removal of the embargo on Canadian cattle will not," says a correspondent in a leading journal, "bring to the stock-raisers of Western Canada such a wide market for their cattle as they had anticipated, a fact which they now realise to their keen disappointment. They had hoped and expected that with the removal of the embargo the British market would absorb the large number of poorly-finished and poor grade stock which found a ready outlet across the border until the United States tariff wall was raised to its now prohibitive height, but with the return of Dr. J. H. Grisdale, Deputy Minister for Agriculture for the Dominion, from his recent mission to England in connection with the Embargo Conferences, came disillusionment. The demand for Canadian cattle in Great Britain will be for our well-bred, good type stores, Dr. Grisdale informed them. Inferior or commonplace animals will get a cool reception, and will certainly prove a losing proposition to both producer and shipper, as the chances are that they will sell for little more than the freight and expenses. Mr. R. I. Hamer, Chief of Cattle Division Live Stock Branch, Ottawa, was equally emphatic on this point. There is only one class which will find favour with the British buyer, Mr. Hamer said, and this is a good heavy-weight butcher type of fine quality, dehorned, free from brands, and capable of being finished. Canada's ability to export high grade cattle suitable for the requirements of this country in sufficient numbers to maintain efficient regularity is still a matter of extreme uncertainty."

What a correspondent calls a "remarkable demonstration" of infuriated honey bees occurred recently, says a Capetown paper. A mare and foal were placed in the garden enclosure near the farm dwelling-house and the stallion was in the paddock near by. The foal, in its gambols, kicked over the beehive in the garden, with the result that the enraged honey-makers swarmed on the foal, stinging it all over the body, and the animal died soon after in great agony. The bees also attacked the mare and the stallion, and injured both seriously. A veterinary officer arrived in time to save these animals from sharing the fate of the foal, but the owner was so severely stung in his efforts to save the foal that he was confined to bed.

A farmer named Giroud, living at Varacieux, having hung his overcoat in a cowshed, a bullock thrust its nose into a pocket of the overcoat, and finding a pocket-book, swallowed it. As the pocket-book contained £190 in bonds and bank-notes, the bullock was killed, and so the money was recovered.

Army Veterinary Service.

Waziristan Campaign Award.

Major (T. Lt.-Col.) H. Greenfield, R.A.V.C., has been awarded the O.B.E. (Military Division) for valuable services rendered in the field with the Waziristan Force, 1920-21.

Diseases of Animals Acts, 1894 to 1914. Summary of Returns.

Period.		Rabies. Cases Confirmed. Dogs.	Rabies. Cases Confirmed. Other Animals.	Anthrax. Outbreaks confirmed.	Anthrax. Animals attacked.	Foot-and-Mouth Disease. Outbreaks confirmed.	Foot-and-Mouth Disease. Animals slaughtered as diseased or exposed to infection.	Glanders (including Farcy).* Outbreaks reported by the Local Authorities.	Glanders (including Farcy).* Animals attacked.	Parasitic Mange.* Outbreaks reported by the Local Authorities.	Parasitic Mange.* Animals attacked.	Sheep Scab. Outbreaks reported by the Local Authorities.	Swine Fever. Outbreaks confirmed.	Swine Fever. Swine slaughtered as diseased or exposed to infection
GT. BRITAIN.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Week ended 30th Dec., 1922 ...		...	...	11	12	1	66	...	...	29	47	24	31	11
Corresponding Week in	1921	...	...	8	10	...	...	...	...	20	31	41	26	3
	1920	1	...	10	10	5	146	...	...	37	58	19	20	9
	1919	...	...	6	8	3	73	1	1	98	163	23	37	16
Total for Year	1922	1	...	515	592	1139	55565	4	4	1025	1442	661	1390	529
	1921	22	1	515	649	44	3085	11	45	2055	3108	757	1285	462
	1920	41	...	459	546	93	11665	15	25	3551	5778	476	1816	715
	1919	150	5	234	313	75	3437	25	61	5003	9773	438	2305	1039

Note.—The figures for the current year are approximate only. *Excluding outbreaks in Army horses.